

Applicant : Tasuku Honjo and Masamichi Muramatsu
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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (previously presented) An isolated nucleic acid encoding a protein comprising the amino acid sequence of SEQ ID NO:8.
2. (currently amended) An isolated nucleic acid encoding a polypeptide comprising a fragment of SEQ ID NO:8, wherein the fragment ~~being at least 10% of the length of SEQ ID NO:8, wherein the polypeptide~~ has cytidine deaminase activity.
3. (previously presented) An isolated nucleic acid comprising the nucleotide sequence of nucleotides 80 to 676 of SEQ ID NO:7.
4. (previously presented) An isolated nucleic acid comprising a nucleotide sequence complementary to nucleotides 80 to 676 of SEQ ID NO:7.
5. - 8. (cancelled)
9. (original) An expression vector comprising the nucleic acid of claim 1.
10. (original) An expression vector comprising the nucleic acid of claim 2.
11. (original) An expression vector comprising the nucleic acid of claim 3.
12. (original) An expression vector comprising the nucleic acid of claim 4.
13. (cancelled)

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14. (original) A cultured host cell comprising the expression vector of claim 9.
15. (original) A cultured host cell comprising the expression vector of claim 10.
16. (original) A cultured host cell comprising the expression vector of claim 11.
17. (original) A cultured host cell comprising the expression vector of claim 12.
18. - 33. (cancelled)
34. (currently amended) An isolated nucleic acid comprising ~~the nucleotide of (a) SEQ ID NO:9, (b) SEQ ID NO:10, or (c) SEQ ID NO:35~~ or a sequence complementary to SEQ ID NO:35.
35. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of ~~the~~ a nucleotide sequence selected from the group consisting of (a) SEQ ID NO:11, (b) SEQ ID NO:12, (c) SEQ ID NO:13, (d) SEQ ID NO:14, ~~or~~ (e) SEQ ID NO:15, ~~(f) SEQ ID NO:9, (g) SEQ ID NO:10, and~~ (h) a sequence complementary to one of (a) through (g).
36. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of the sequence of:
(a) SEQ ID NO:9, or
(b) a sequence complementary to the full length of SEQ ID NO:9.
37. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of a continuous sequence of over 20 nucleotides ~~bases that hybridizes to a probe consisting of:~~
(a) nucleotides 1 to 1118 of SEQ ID NO: 9, ~~in 0.9% NaCl at 75°C,~~ or
(b) a sequence complementary to nucleotides 1 to 1118 of SEQ ID NO:9, ~~in 0.9% NaCl at 75°C.~~
38. - 49. (cancelled)

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50. (currently amended) An isolated nucleic acid encoding a polypeptide having a cytidine deaminase activity, wherein the nucleic acid:

(i) encodes a polypeptide fragment of SEQ ID NO: 8, wherein the fragment has cytidine deaminase activity and comprises ~~comprising~~ at least 70% of the length of the amino acid sequence of SEQ ID NO:8;

(ii) encodes a polypeptide that is at least ~~[[80%]]~~ 95% identical to the amino acid sequence of SEQ ID NO:8;

(iii) comprises a nucleotide sequence that is at least ~~[[80%]]~~ 95% identical to the coding sequence of SEQ ID NO:7; or

(iv) hybridizes to a probe the sequence of which consists of the coding sequence of SEQ ID NO:7, in 0.9% NaCl at ~~[[45°C]]~~ 75°C.

51. (currently amended) The nucleic acid of claim 50, wherein the nucleic acid encodes a polypeptide comprising a fragment of SEQ ID NO:8, the fragment being at least 80% of the length of the amino acid sequence of SEQ ID NO:8, and having cytidine deaminase activity.

52. (currently amended) The nucleic acid of claim 50, wherein the nucleic acid encodes a polypeptide comprising a fragment of SEQ ID NO:8, the fragment being at least 90% of the length of the amino acid sequence of SEQ ID NO:8 and having cytidine deaminase activity.

53. (cancelled)

54. (previously presented) The nucleic acid of claim 50, wherein the nucleic acid encodes a polypeptide that is at least 95% identical to SEQ ID NO:8.

55. (cancelled)

56. (previously presented) The nucleic acid of claim 50, wherein the nucleic acid comprises a nucleotide sequence that is at least 95% identical to the coding sequence of SEQ ID NO:7.

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57. (currently amended) The nucleic acid of claim 50, wherein the nucleic acid hybridizes to a probe the sequence of which consists of the coding sequence of SEQ ID NO:7, in 0.9% NaCl at [[55°C]] 75°C.

58. - 59. (cancelled)

60. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of a continuous nucleotide sequence of over 20 ~~bases~~ nucleotides of:

(i) a nucleotide sequence that encodes a polypeptide fragment of SEQ ID NO:8, wherein the fragment has cytidine deaminase activity and is the fragment being at least 70% of the length of SEQ ID NO:8; or

~~(ii) a nucleotide sequence that encodes a polypeptide that is at least 80% identical to the amino acid sequence of SEQ ID NO:8;~~

~~—— (iii) a nucleotide sequence that is at least 80% identical to the coding sequence of SEQ ID NO:7; or~~

[[(iv)]] (ii) a nucleotide sequence complementary to any one of (i) through (iii), wherein the nucleic acid hybridizes to a probe consisting of a sequence that encodes a polypeptide of SEQ ID NO:8 nucleic acid the sequence of which consists of any one of (i) through (iv), in 0.9% NaCl at 75°C.

61. (previously presented) An isolated nucleic acid that encodes a polypeptide consisting of the amino acid sequence of SEQ ID NO: 8.

62. (previously presented) An isolated nucleic acid that is complementary to the nucleic acid of claim 61.

63. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of a sequence of over [[20]] 50 continuous ~~bases~~ nucleotides of nucleotides 80 to 676 of SEQ ID NO:7.

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64. (currently amended) An isolated nucleic acid ~~comprising~~ consisting of a nucleotide sequence complementary to over ~~[[20]]~~ 50 continuous ~~bases~~ nucleotides of nucleotides 80 to 676 of SEQ ID NO:7.

65. (previously presented) An expression vector comprising a nucleic acid according to claim 50.

66. (previously presented) A cultured host cell comprising an expression vector according to claim 65.

67. (previously presented) An expression vector comprising a nucleic acid according to claim 51.

68. (previously presented) A cultured host cell comprising an expression vector according to claim 67.

69. (previously presented) An expression vector comprising a nucleic acid according to claim 52.

70. (previously presented) A cultured host cell comprising an expression vector according to claim 69.

71. - 72. (cancelled)

73. (previously presented) An expression vector comprising a nucleic acid according to claim 54.

74. (previously presented) A cultured host cell comprising an expression vector according to claim 73.

75. - 76. (cancelled)

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77. (previously presented) An expression vector comprising a nucleic acid according to claim 56.
78. (previously presented) A cultured host cell comprising an expression vector according to claim 77.
79. (previously presented) An expression vector comprising a nucleic acid according to claim 57.
80. (previously presented) A cultured host cell comprising an expression vector according to claim 79.
81. - 86. (cancelled)
87. (previously presented) An expression vector comprising a nucleic acid according to claim 61.
88. (previously presented) A cultured host cell comprising an expression vector according to claim 87.
89. - 94. (cancelled)
95. (currently amended) A method of making a polypeptide with cytidine deaminase activity that (i) is a fragment of SEQ ID NO:8, and comprises at least 70% of the length of the amino acid sequence of SEQ ID NO:8, or (ii) is at least ~~[[80%]]~~ 95% identical to the amino acid sequence of SEQ ID NO:8, the method comprising culturing a cell according to claim 66.
96. (currently amended) A method of making a polypeptide with cytidine deaminase activity that comprises a fragment of SEQ ID NO:8, the fragment being at least 80% of the length of the amino acid sequence of SEQ ID NO:8 and having cytidine deaminase activity, the method comprising culturing a cell according to claim 68.

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97. (currently amended) A method of making a polypeptide with cytidine deaminase activity that comprises a fragment of SEQ ID NO:8, the fragment being at least 90% of the length of the amino acid sequence of SEQ ID NO:8 and having cytidine deaminase activity, the method comprising culturing a cell according to claim 70.

98. (cancelled)

99. (currently amended) A method of making a polypeptide with cytidine deaminase activity that is at least 95% identical to the full length of the amino acid sequence of SEQ ID NO:8, the method comprising culturing a cell according to claim 74.

100. (cancelled)

101. (previously presented) A method of making a polypeptide consisting of the amino acid sequence of SEQ ID NO: 8, the method comprising culturing a cell according to claim 88.

102. (new) An isolated nucleic acid consisting of the nucleotide sequence of:

- (a) SEQ ID NO:10; or
- (b) a sequence complementary to SEQ ID NO:10.

103. (new) An isolated nucleic acid consisting of the nucleotide sequence of:

- (a) SEQ ID NO:11; or
- (b) a sequence complementary to SEQ ID NO:11.

104. (new) An isolated nucleic acid consisting of the nucleotide sequence of:

- (a) SEQ ID NO:12; or
- (b) a sequence complementary to SEQ ID NO:12.

105. (new) An isolated nucleic acid consisting of the nucleotide sequence of:

- (a) SEQ ID NO:13; or
- (b) a sequence complementary to SEQ ID NO:13.

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106. (new) An isolated nucleic acid consisting of the nucleotide sequence of:
(a) SEQ ID NO:14; or
(b) a sequence complementary to SEQ ID NO:14.
107. (new) An isolated nucleic acid consisting of the nucleotide sequence of:
(a) SEQ ID NO:15; or
(b) a sequence complementary to SEQ ID NO:15.
108. (new) An isolated nucleic acid consisting of over 50 continuous nucleotides of the nucleotide sequence of:
(a) SEQ ID NO:11; or
(b) a sequence complementary to SEQ ID NO:11.
109. (new) An isolated nucleic acid consisting of over 20 continuous nucleotides of the nucleotide sequence of:
(a) SEQ ID NO:12; or
(b) a sequence complementary to SEQ ID NO:12.
110. (new) An isolated nucleic acid consisting of over 20 continuous nucleotides of the nucleotide sequence of:
(a) SEQ ID NO:13; or
(b) a sequence complementary to SEQ ID NO:13.
111. (new) An isolated nucleic acid consisting of over 20 continuous nucleotides of the nucleotide sequence of:
(a) SEQ ID NO:14; or
(b) a sequence complementary to SEQ ID NO:14.
112. (new) An isolated nucleic acid comprising SEQ ID NO:10, wherein the nucleic acid encodes a peptide having cytidine deaminase activity.

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113. (new) An isolated nucleic acid comprising a sequence of over 50 continuous nucleotides of nucleotides 80 to 676 of SEQ ID NO:7, wherein the continuous nucleotides of SEQ ID NO:7 encode a polypeptide having cytidine deaminase activity.

114. (new) A method of making a polypeptide comprising the amino acid sequence of SEQ ID NO:8, the method comprising culturing a cell according to claim 14.